

Abstract

A substrate 110 that is not lying flat on its substrate tray 100 can present significant process problems when a vacuum pickup attempts to pick up the substrate and fails due to the lack of a proper bond forming between the pickup and the substrate 110. The substrate 110 left behind on the substrate tray 100 could require human intervention. Intervention slows down the manufacturing process and increases costs. A method and apparatus to ensure that substrates are laying flat when presented to the vacuum pickup pad 220 is disclosed. A plate 310 with protrusions 320 is raised into a substrate tray 100 with holes. The protrusions 320 lift the substrates 110 up off the bottom of the substrate tray 100 and ensure that they are laying flat when presented to the vacuum pickup pad 220.